



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

AUG 31 2018

Robert Mancini
Project Manager, Refining Business Unit
Chevron Environmental Management Company
1200 State Street
Perth Amboy, New Jersey 08861

Re: Chevron Waterbody Sediment Sampling
Former Chevron Perth Amboy Facility
Perth Amboy, Middlesex County, New Jersey
EPA ID #: NJD081982902

Dear Mr. Mancini:

The U.S. Environmental Protection Agency (EPA) Region 2 and the New Jersey Department of Environmental Protection (NJDEP) have drafted comments regarding Chevron's upcoming waterbody sediment sampling. Chevron previously sampled Woodbridge Creek, Spa Spring Creek, and the Arthur Kill for VOCs, SVOCs, EPH, PCB, Metals, and Pesticides in 2002 and 2014. However, based on a review of data collected from the 2 sampling periods, EPA and NJDEP have determined that the three waterbodies sediment, associated with the Former Chevron Perth Amboy Refinery, must be further investigated (i.e., additional sampling must be performed) pursuant to N.J.A.C. 7:26E-2.1(a)14; 2.1(d); 3.6, 4.8, 4.9, 5.1 (e), et al., and NJDEP's *Ecological Evaluation Technical Guidance* (EETG), February 2015. The goal of the additional investigation is to complete a comprehensive RCRA Facility Investigation (RFI) of these waterbodies and thus fulfill the requirements set forth by the 2013 EPA HSWA Permit renewal.

Additional sampling is needed to complete delineation of product and other contaminants along all the waterbodies. Enclosed are EPA and NJDEP comments for the upcoming sediment sampling. To meet these sampling objectives, a Field Sampling and Analysis Plan (FSAP) must be designed to characterize and delineate site-related free and residual petroleum product and other site-related contaminants, such that the lateral and vertical extent of contamination are well defined to determine the approximate volume of contamination in these water bodies.

Should you have any questions or would like to discuss this matter further, I can be reached at 212-637-3703, or via email at vargas.ricardito@epa.gov.

Sincerely,

A handwritten signature in cursive script that reads "Ricardito Vargas".

Ricardito Vargas
Project Manager
Hazardous Waste Programs Branch

Enclosure

cc: Lynn Vogel, NJDEP (electronic copy only)

6105 LC 30A

Chevron/Buckeye, Perth Amboy, NJ
EPA and NJDEP Recommendations/Comments for 2018 Sediment Sampling
September 2018

General Comments

1. Historic aerial photographs and existing sediment data suggest there are elevated levels of petroleum product and contaminants at historic outfall/discharge areas located near transect 3 (oil/water separator, SMU 40) and transect 2 (former tidal creek) in Woodbridge Creek. Chevron should identify all other historic contaminant migration pathways into Woodbridge Creek, Spa Spring Creek, and the Arthur Kill, including direct or indirect discharge of untreated or treated industrial process waste. The specific contaminants, mass estimates, and timeframe/duration of the discharge should be provided.
2. Chevron submitted an updated data sheet to EPA on June 29, 2018. EPA and NJDEP are requesting that the facility no longer report data as "ND" or Non-Detect. Chevron needs to report the actual results, which can be followed by a "U" in parentheses to indicate that the results are less than the Method Detection Limit (MDL). EPA and NJDEP request an updated data table to reflect this comment.

Specific Comments

Woodbridge Creek

1. Background Samples: EPA and NJDEP do not accept SED-09 as an appropriate background location. This transect contains EPH, among other contaminants, and thus cannot be considered as background. SED-10 does look like an area that can potentially be used as background. Chevron needs to re-sample this transect for all contaminants and product. EPA and NJDEP also believe that 3 sample points along the transect may not be sufficient to determine background concentrations. Thus, EPA and NJDEP are requesting Chevron to use USEPA's ProUCL method, including the successive removal of statistical outliers, to determine background using a minimum of 8 samples.
2. EPA is requiring an additional transect to sample for all contaminants (VOCs, SVOCs, EPH, PCB, Metals, Organochlorine Pesticides, TOC, and particle grain size) at the midpoint between SED -09 and SED-06. The transect should contain 3 points (A-C), with C being closest to the facility, B the midpoint, and A located on the opposite side of the facility. If results show hotspots, Chevron must delineate by adding additional transects 200 feet from the hotspot in the upstream and downstream direction.
3. SED-06 – SED-03
 - a. Resample transect for all parameters for all points and at consistent depths (surface and sub-surface)
 - b. Add 2 additional points (A' and C') to extend the transect to the facility property and the Northfield property/Southern Parcels. These additional points need to be sampled for the full suite of parameters
4. EPA is requiring an additional transect to sample for all contaminants (VOCs, SVOCs, EPH, PCB, Metals, Pesticides, Herbicides) at the midpoint between SED -03 and SED-02 and midway between SED-02 and SED-01. The transects should contain 3 points (A-C), with C being closest to the facility, B the midpoint, and A located on the opposite side of the facility. If results show

hotspots, Chevron must delineate by adding additional transects 200 feet from the hotspot, both upstream and downstream.

5. SED-02: Resample transect for all parameters for all points and at consistent depths (surface and sub-surface)
6. SED-01: Resample transect for all parameters for all points and at consistent depths (surface and sub-surface)
7. SED -19:
 - a. Add additional point (A) along transect and sample for full suite of parameters
 - b. Resample transects for all parameters for all points and at consistent depths (surface and subsurface)
8. Other transects should be added as needed to investigate/delineate discharge areas identified as per General Comment 1 above.
9. A transect is needed between the former Chevron Refinery Site and DITSED-08. Please explain whether horizontal and vertical delineation is complete in the DITSED-8 area.
10. Chevron should clarify if there were any impacts or sediment removal activities implemented as a result of the engineered wetlands between transect 6 and 8 along Woodbridge Creek and Spa Spring Creek.

Spa Spring Creek

1. Background Sample: Chevron needs to establish an appropriate background location and apply the ProUCL method with a minimum of 8 samples.
2. EPA requires additional sampling at all former transects and points for sub-surface sediment.
3. Additional discrete samples or transects should be added as needed to investigate/delineate discharge areas identified as per General Comment 1 above.
4. Clarify the location of the former NJPDES discharge point on Spa Spring Creek relative to existing sample locations, how long this discharge point was in use, and what are the permit discharge limits.

Arthur Kill

1. EPA is requiring additional sub-surface sampling along all former sampling points for all parameters.
2. Additional discrete samples or transects should be added as needed to investigate/delineate discharge areas identified as per General Comment 1 above.
3. EPA is requesting additional information on the dates/location of dredging in the Arthur Kill.